

Remarks/Arguments

Reconsideration of this application is requested.

Carr discloses the following in paragraphs 0025 and 0026.

[0025] Some postal meters can provide a "marketing image" in a "marketing space" (and/or a "mailer space") near or adjacent to printed postage indicia. A marketing image can take many forms, e.g., a company logo, graphic, advertisement, design, picture, image, text, indicia, trademark, etc. Postal meters can be loaded or programmed with an appropriate marketing image, which is then printed onto an envelope, sticker or mailing package.

[0026] Our inventive improvements provide a marketing image that is embedded with steganographic encoding, e.g., in the form of a digital watermark. An advantage of hosting a digital watermark in a marketing image is that the watermark can be added to marketing images without changing the firmware/hardware that are in deployed postal meters, since many of the deployed postal meters are typically equipped to process and apply marketing images. Marketing images can be digitally watermarked and stored as an electronic or digital file. The watermarked digital file is then uploaded into a deployed postal meter. The uploading can be accomplished with a communications link, e.g., provided over the internet or network, or through direct communications with a storage module such as a SmartCard, optical disk, magnetic disk, electronic memory circuit, etc.

Carr discloses the following in paragraph 0014.

[0014] According to one aspect of the invention, we provide a method of marking an item that will travel in a mail system. The item includes at least a first outer surface and a second outer surface. The method includes the steps of: at a postage meter receiving a first image, wherein the first image includes at least a first digital watermark embedded therein; with the postage meter, printing the first image onto a first area of the first outer surface; and with the postage meter, printing postage indicia onto a second area of the first outer surface. In some implementations, the first image includes a so-called marketing image, which may include advertising, logos, graphics, etc. The first digital watermark may be fragile or robust.

Carr discloses the following in paragraph 0052.

[0052] In a second option, deposited mail is associated with the sender. For example, envelopes are digitally watermarked to include a unique identifier as discussed above (e.g., via postal indicia, marketing images or even other printing, e.g., background tint or patterns). Prior to acceptance into the postal system, however, the envelopes are scanned to extract the watermark identifier. Once extracted the watermark identifiers are associated with the sender. Hence, each mail item is associated with its sender. This information can be stored in a database.

Carr discloses the employment of digital watermarking techniques.

Ur discloses the following in lines 30-32 of col. 2.

Using this method the bias transformations associated with a printer and/or a scanner can be accurately measured and stored for future use in printing.

Ur discloses the following in lines 61 of col. 6 to line 5 of col. 7.

The D-Form image is compared with the scanned image of the original form in step 430. The comparison is carried out by a block-wise registration technique between the images of the original form with that of the printed form image. The outcome of this registration is the desired bias transformation T of the particular scanner/printer combination, which compensates also for non-linear distortions. The transformation is then stored in a manner identifying the first transformation with the calibrated scanner/ printer combination, such as in a suitable table, for future use with the same printer/scanner combination in a usage phase to be described below.

Ur discloses the following in lines 28-34 of col. 9.

If the transformation appropriate to a particular primer has been stored together with the image of a particular form, then this information and the soft copy of the form can be recalled. The desired text is then entered as described above by the User in the desired locations on the scanned form via a suitable text processing application and this text is stored in a 17 Fill line.

Ur discloses bias transformation (geometrical bias) associated with printer and/or scanner.

Regarding claim 1 as amended and those claims dependent thereon the cited references do not disclose or anticipate the following step of claim 1 as amended, namely applying a transformation to the watermark data to improve the quality of information retrieved from the digital image data after the watermarked digital image has been printed and scanned to be printed and produce transformed watermark data, the transformation being at least approximately an inverse of a print-scan distortion transformation, wherein the print-scan distortion transformation approximates the effect of printing and scanning on pixel values of the watermarked digital image data.

Regarding claim 11 as amended and those claims dependent thereon Carr and/or Ur do not disclose or anticipate the following steps of claim 11 namely applying a transformation to the watermark data to improve the quality of information retrieved from the digital image data after the watermarked digital image has been printed and scanned to be printed and produce transformed watermark data, the transformation being at least approximately an inverse of a print-scan distortion transformation, wherein the print-scan distortion transformation approximates the effect of printing and scanning on pixel values of the watermarked digital image data.

Regarding claims 19 as amended and those claims dependent thereon Carr and/or Ur do not disclose or anticipate the following step of claim 19 namely (c) applying a print-scan distortion transformation wherein the print-scan transformation approximates the effect of printing and scanning on pixel values of the watermarks digital image data to the watermarked digital image data to produce transformed watermarked digital image data d;

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In view of the above claims 1, 2, 4-9 and 11-19 as amended are patentable. If the Examiner has any questions would he please call the undersigned at the telephone number noted below.

Please charge any additional fees or credit any overpayment to Deposit Account Number 16-1885.

Respectfully submitted,

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